Ralu Divan
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Biography:
Ralu Divan (Ph.D. University of Bucharest, Romania, 1999; postdoc: ANL) is an Assistant Chemist. Before her Ph.D., she was a project manager for optical resist development and the leader of the mask fabrication laboratory at the Research Institute for Electronic Compounds in Bucharest, and then researched microfabrication by and fundamental chemistry of wet etching of semiconductors and glass at the National Institute of Microtechnology (IMT) and as a guest researcher at the Fraunhofer Institute for Solid State Technology Munich (Germany) and LAAS/CNRS Toulouse (France). At APS, she further advanced soft x-ray lithography for x-ray zone plates and hard x-ray lithography for LIGA applications. Her current research interests are in the lithographic properties and chemistry of materials, characterizing interfacial and compatibility properties of materials used in MEMS and NEMS, nanogels, and metal nanoparticles synthesis. She has published over 100 papers in journals and conference proceedings, and is a recipient of an R&D 100 Award.

Selected recent publications:
"X-ray Photochemical Generation of Gold Nanoparticles in Solution," Q. Ma, R. Divan, D.C. Mancini, D.T. Keane, *Nature*, In Press

"X-ray induced substrate-carrier mediated deposition of metal on GaAs," Q. Ma, R. Divan, D.C. Mancini, D.T. Keaton, R.A. Rosenberg, J.P Quitana, *Appl. Phys. Lett*. 89 (2006), 083114

"Magnetic Vortex Core Dynamics in Cylindrical Ferromagnetic Dots," K.Yu. Guslienko, X.F. Han, D.J. Keavny, R. Divan, S.D. Bader, *Phys. Rev. Lett*. 96, 067205, 2006

"Fabrication of Nanopatterned Stimuli-Responsive Hydrogels by E-Beam Lithography," V.R. Tirumala, R. Divan, L. E. Ocola, D.C. Mancini, *J. Vac. Sci. Technol. B* 23(6) (2005), pp. 3124-3128

"Improvements in Graphite-Based X-ray Mask Fabrication for Ultra-Deep X-ray Lithography," R. Divan, D.C. Mancini, S.M. Gallagher, J. Booske, and Dan van der Weide, *Microsystem Technologies*, 10 (10) (2004), pp. 728-734

"Roughening and Smoothing Dynamics during KOH Silicon Etching," R. Divan, N. Moldovan, H. Camon, *Sensors and Actuators*, 74 (1999) pp. 18-23